We claim:

1. A catalyst lacking platinum and palladium, said catalyst comprising:

a metal particulate having a particle size less than about 100 Angstroms; and

a support.

2. The catalyst of claim 1, wherein said particulate has a particle size is less than about 70 Angstroms.

3. The catalyst of claim 1, wherein said particulate has a particle size is between about 10 and about 50 Angstroms.

4. The catalyst of claim 1, wherein said particulate has a particle size is between about 10 and about 40 Angstroms.

5. The catalyst of claim 1, wherein said particulate has a particle size is between about 10 and about 30 Angstroms.

6. The catalyst of claim 1, wherein said particulate has a particle size is between about 10 and about 20 Angstroms.

7. The catalyst of claim 1, wherein said metal particulate is between about .0001% to about 99% by weight of said catalyst.

8. The catalyst of claim 1, wherein said particulate has a particle proximity between about 2 Angstroms and about 300 Angstroms.

9. The catalyst of claim 1, wherein said particulate comprises at least one metal selected from the group consisting of nickel, and nickel alloy.

10. The catalyst of claim 1, wherein said particulate consists essentially of at least one metal selected from the group consisting of nickel and nickel alloy.

11. The catalyst of claim 9, wherein said nickel alloy comprises at least one element selected from the group consisting of Al, Co, Sn, Mn, Ti, and Fe.

12. The catalyst of claim 9, wherein said nickel alloy comprises at least one element selected from the group consisting of Al, Co, Sn, Mn, and Ti.

13. The catalyst of claim 9, wherein said nickel alloy is an alloy selected from the group consisting of NiMn alloy, NiCoAl alloy, NiCoMnTi alloy, and NiCoMnFe alloy.

14. The catalyst of claim 9, wherein said nickel alloy has an fcc crystal orientation.

15. The catalyst of claim 1, wherein said support comprises at least one inorganic oxide.

16. The catalyst of claim 1, wherein said support comprises at least one metal oxide.

17. The catalyst of claim 16, wherein said at least one metal oxide comprises at least one element selected from the group consisting of Ni, Co, Mn, Ti, Zr, Fe, and the rare earth elements.

18. The catalyst of claim 16, wherein said at least one metal oxide comprises at least one oxide selected from the group consisting of manganese oxide, nickel manganese oxide, and mixtures thereof.

19. The catalyst of claim 16, wherein said at least one metal

oxide is multivalent.

20. The catalyst of claim 16, wherein said at least one metal oxide comprises an oxide of Mn, Ni, Co, and Ti.

21. The catalyst of claim 16, wherein said at least one metal oxide comprises an oxide of Mn, Ni, Co, Ti, and Fe.

22. The catalyst of claim 16, wherein said at least one metal oxide comprises an oxide of Mn, Co, and Ti.

23. The catalyst of claim 16, wherein said at least one metal oxide comprises fine grained oxides and course grained oxides.

24. The catalyst of claim 16, wherein said at least one metal oxide is microcrystalline.

25. The catalyst of claim 1, wherein said support comprises carbon.

26. The catalyst of claim 1, further comprising zeolite.

27. The catalyst of claim 1, wherein said catalyst is

compositionally graded within said support.

28. The catalyst of claim 1, wherein said particulate is substantially uniformly distributed throughout said support.

29. The catalyst of claim 1, wherein said catalyst is formed by leaching at least a substantial portion of the bulk of a hydrogen storage alloy.

30. A catalyst, comprising:

a nickel and/or nickel alloy particulate having a particle size less than about 100 Angstroms, said nickel alloy lacking platinum and palladium; and

a support.

31. The catalyst of claim 30, wherein said particulate has a particle size is less than 70 Angstroms.

32. The catalyst of claim 30, wherein said particulate has a particle size is between about 10 and about 50 Angstroms.

33. The catalyst of claim 30, wherein said particulate has a particle size is between about 10 and about 40 Angstroms.

34. The catalyst of claim 30, wherein said particulate has a particle size is between about 10 and about 30 Angstroms.

35. The catalyst of claim 30, wherein said particulate has a particle size is between about 10 and about 20 Angstroms.

36. The catalyst of claim 30, wherein said particulate is about .0001% to about 99% by weight of said catalyst.

37. The catalyst of claim 30, wherein said particulate has a particle proximity between about 2 Angstroms and about 300 Angstroms.

38. The catalyst of claim 30, wherein said nickel alloy comprises at least one element selected from the group consisting of Al, Co, Sn, Mn, Ti, and Fe.

39. The catalyst of claim 30, wherein said nickel alloy comprises at least one element selected from the group consisting of Al, Co, Sn, Mn, and Ti.

40. The catalyst of claim 30, wherein said nickel alloy is an

alloy selected from the group consisting of NiMn alloy, NiCoAl alloy, NiCoMnTi alloy, and NiCoMnFe alloy.

41. The catalyst of claim 30, wherein said nickel alloy has an fcc crystal orientation.

42. The catalyst of claim 30, wherein said support comprises at least one inorganic oxide.

43. The catalyst of claim 30, wherein said support comprises at least one metal oxide.

44. The catalytic material of claim 43, wherein said at least one metal oxide comprises at least one element selected from the group consisting of Ni, Co, Mn, Ti, Zr, Fe, and the rare earth elements.

45. The catalytic material of claim 43, wherein said at least one metal oxide comprises an oxide of Mn.

46. The catalyst of claim 43, wherein said at least one metal oxide comprises an oxide of Mn and Ni.

47. The catalyst of claim 43, wherein said at least one metal oxide comprises an oxide of Mn, Ni, Co, and Ti.

48. The catalyst of claim 43, wherein said at least one metal oxide comprises an oxide of Mn, Ni, Co, Ti, and Fe.

49. The catalyst of claim 43, wherein said at least one metal oxide comprises an oxide of Mn, Co, and Ti.

50. The catalyst of claim 43, wherein said at least one metal oxide comprises fine grained oxides and course grained oxides.

51. The catalyst of claim 30, wherein said support material comprises carbon.

52. The catalyst of claim 30, further comprising zeolite.

53. The catalyst of claim 30, wherein the density of said particulate is graded within support.

54. The catalyst of claim 30, wherein said particulate is substantially uniformly distributed throughout said support.

55. The catalyst of claim 30, wherein said catalyst is formed by leaching at least a substantial portion of the bulk of a hydrogen

storage alloy.

56. A method for making a catalyst, comprising the steps of:

providing a hydrogen storage alloy; and

leaching at least a significant portion of the bulk of said alloy.

57. The method of claim 56, wherein said leaching step comprises the step of leaching at least 10,000 Angstroms of said alloy.

58. The method of claim 56, wherein said leaching step comprises the step of leaching at least 10% of said alloy.

59. The method of claim 56, wherein said leaching step comprises the step of leaching substantially all of said alloy.

60. The method of claim 56, wherein said leaching step comprises the step of converting said alloy to at least one material selected from the group consisting of oxides, phosphides, chlorides, silicides, carbides, sulfides, and mixtures thereof.

61. The method of claim 56, wherein said leaching step comprises the step of oxidizing said alloy.

62. The method of claim 56, wherein said leaching step comprises the step of:

contacting said hydrogen storage alloy with an alkaline material.

63. The method of claim 56, wherein said leaching step comprises the step of:

contacting said hydrogen storage alloy with an acidic material.

64. The method of claim 56, wherein said leaching step comprises the steps of:

contacting said hydrogen storage alloy with an alkaline material; and

contacting said hydrogen storage alloy with an acidic material.

65. The method of claim 56, wherein said leaching step comprises the step of:

alternatingly contacting said hydrogen storage alloy with alkaline and acidic materials.

66. The method of claim 62, wherein said alkaline material

comprises an alkali metal hydroxide.

67. The method of claim 66, wherein said alkali metal hydroxide is selected from the group consisting of potassium hydroxide, sodium hydroxide, lithium hydroxide, and mixtures thereof.

68. The method of claim 63, wherein said acidic material comprises an acid selected from the group consisting of HF, HCl, HNO_3, H_2SO_4, and mixtures thereof.

69. The method of claim 56, wherein said leaching step is chemical leaching.

70. The method of claim 56, wherein said leaching step is electrochemical leaching.

71. A catalyst comprising a metal particulate and a support, said catalyst characterized by being formed by the process comprising the step of leaching at least a significant portion of the bulk of a hydrogen storage alloy.

72. The catalyst of claim 71, wherein said leaching step comprises the step of leaching at least 10,000 Angstroms of said

hydrogen storage alloy.

73. The catalyst of claim 71, wherein said leaching step comprises the step of leaching at least 10% of said hydrogen storage alloy.

74. The catalyst of claim 71, wherein said leaching step comprises the step of leaching substantially all of said hydrogen storage alloy.

75. The catalyst of claim 71, wherein said leaching step comprises the step of converting said hydrogen storage alloy to at least one material selected from the group consisting of oxides, phosphides, chlorides, silicides, carbides, sulfides, and mixtures thereof.

76. The catalyst of claim 71, wherein said metal particulate has a particle size less than 100 Angstroms.

77. The catalyst of claim 71, wherein said metal particulate comprises nickel and/or nickel alloy.

78. The catalyst of claim 71, wherein said oxide is an inorganic oxide.

79. The catalyst of claim 71, wherein said oxide is metal oxide.

80. A fuel cell, comprising:

an anode having a catalyst lacking platinum and palladium, said catalyst comprising:

a metal particulate having a particle size less then about 100 Angstoms,

and a support;

81. The fuel cell of claim 80, further comprising:

a cathode; and

an electrolyte.

82. The fuel cell of claim 80, wherein said electrolyte comprises an alkaline material.

83. The fuel cell of claim 80, wherein said particulate is uniformly distributed thoughout said support.

84. The fuel cell of claim 80, wherein said particulate is graded within said support.

85. A fuel cell, comprising:

an anode having a catalyst comprising:

a nickel and/or nickel alloy particulate having a particle size less than about 100 Angstroms, said nickel alloy lacking platinum and palladium,

and a support;

86. The fuel cell of claim 85, further comprising:

a cathode; and

an electrolyte.

87. The fuel cell of claim 85, wherein said electrolyte comprises an alkaline material.

88. The fuel cell of claim 85, wherein said particulate is uniformly distributed thoughout said support.

89. The fuel cell of claim 85, wherein said particulate is graded within said support.

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